

IN THE CLAIMS

1. (currently amended) A method for producing a stably transformed chimeric dicotyledonous plant having transgenic root tissue, the method comprising the steps of:
obtaining a stem or hypocotyl explant from a selected dicotyledonous plant species, wherein the hypocotyl explant has a cut end below the cotyledon;
transforming the stem or hypocotyl explant with Agrobacterium rhizogenes containing an exogenous nucleic acid sequence capable of being transferred to the explant, wherein the cut end of the hypocotyl explant is contacted with the Agrobacterium rhizogenes;
culturing the transformed explant in a root initiating media to produce transformed roots; and
transferring the transformed roots to soil or a hydroponic environment to produce the chimeric dicotyledonous plant having transformed roots and wild type shoots, stems and leaves,
wherein the dicotyledonous plant is soybean, ~~potato, cotton or tomato~~.

2-4. (canceled)

5. (canceled)

6-7. (canceled)

8. (previously presented) The method of claim 1, wherein transformed roots are initiated in the hypocotyl by placing the end of the hypocotyl contacted with the Agrobacterium rhizogenes in a media containing $\frac{1}{4}$ strength Murashige and Skoog media.

9. (original) The method of claim 8 wherein the media further comprises a selectable agent.

10. (original) The method of claim 9 wherein the selectable agent is kanamycin.

11. (previously presented) The method of claim 10 wherein the concentration of kanamycin in the media is no more than 50 mg/L.

12-26. (canceled)